

Title (en)
DIMENSIONAL MEASURING CHAIN WITH A LINEAR OUTPUT

Publication
EP 0378017 B1 19920415 (FR)

Application
EP 89403422 A 19891211

Priority
FR 8816244 A 19881209

Abstract (en)
[origin: EP0378017A1] The capacitive dimensional measuring chain with linear output consists mainly of a capacitive sensor (1a) formed by a detection electrode and a guard electrode surrounding the detection electrode supplied respectively by two sources of bias voltage (V_p , V'_p), a reference capacitor (6a) supplied by a reference voltage source (7a), and a circuit (9) which measures the distance (e) between the detection electrode and a conducting component (P) placed opposite this electrode. The sources of bias voltage are variable and are controlled in amplitude by a distance-measuring signal (V_e) delivered by the measuring circuit. The measuring circuit contains means (90 to 93) for amplifying and demodulating an input error signal which represents a difference between a charge on the capacitance of the sensor (C_{cpt}) formed between the detection electrode (10) and the component (P) separated by the distance (e) to be measured and a charge on the reference capacitor. The distance-measuring signal supplied by the measuring circuit represents linearly the distance to be measured (e) and, because of the control of the amplitude, stabilises the sources of bias voltage in temperature and time. <IMAGE>

IPC 1-7
G01B 7/02; **G01B 7/14**

IPC 8 full level
G01B 7/02 (2006.01); **G01B 7/14** (2006.01); **G01D 5/22** (2006.01); **G01D 5/24** (2006.01)

CPC (source: EP KR US)
G01B 7/023 (2013.01 - EP US); **G01B 7/14** (2013.01 - EP KR US)

Cited by
FR3072176A1; FR2763124A1; FR2693555A1; NL2004052C2; EP0653606A1; FR2712690A1; US5497101A; WO9852004A1; WO2019072665A1

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